

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application. No.: 10/049,834

Confirmation No. 2328

Applicants : Wolfgang SCHEIBE, et al.

Filed : February 19, 2002

TC/A.U. : 3752

Examiner : Thach Bui

Docket No. : 842FR/50684

Customer No. : 23911

Title: : INJECTION VALVE FOR A COMBUSTION ENGINE

Attention: Office of Petitions

Mail Stop Petition

Commissioner for Patents

P.O. Box 1450

Alexandria VA 22313-1450

FAX (571) 273-8300

PETITION UNDER 37 C.F.R. § 1.181(a)

Sir:

Applicants respectfully petition the Office to withdraw the holding of abandonment in the above-referenced patent application.

In the above-referenced patent application, the Office issued an Office Action on February 5, 2004. In response to the Office Action, Applicants timely filed a Reply with a one-month Extension of Time on June 2, 2004. A copy of the receipt postcard with the date stamp of the Patent Office on the postcard indicating that the Office received the Reply on June 2, 2004, is enclosed. A billing entry in Applicants' matter file (copy also enclosed) states that on August 11, 2004, Applicants' attorney received a telephone call from the Examiner regarding whether Applicants had filed a response to the Office Action of February 5, 2004. The entry states that Applicants' attorney telephoned the Examiner to advise that a response was filed on June 2, 2004. This billing entry then indicates that Applicants' attorney received a telephone call from the

Examiner advising that the response was timely filed but that the Examiner had mistakenly sent a Notice of Abandonment. Applicants then received the Notice of Abandonment that was mailed by the Office on August 12, 2004. In response, Applicants filed a Request to Withdraw the Notice of Abandonment on August 19, 2004. A copy of the date-stamped receipt postcard for filing of the Request to Withdraw the Notice of Abandonment is also enclosed.

It appears that whereas Applicants timely filed a response to the Office Action of February 5, 2004, in the Reply that was filed, Applicants' representative transposed two numbers of the Application's Serial No. Applicants filed the Reply by listing Application Serial No. 10/049,843 on the Reply instead of Application Serial No. 10/049,834. However, Applicants respectfully note that even though two numbers of the Application Serial No. were transposed, Applicants correctly identified the patent application by other correct identifying information including: the Applicants' names, the Filing Date, the Art Unit, the Examiner's name, the Attorney Docket No., the Title of the application, and the Confirmation No. associated with the patent application.

Therefore, Applicants respectfully submit that they timely replied to the Office Action of February 5, 2004, and identified in the Reply the patent application to which the Reply was associated with sufficient identifying data that should have allowed the Reply to be properly matched with the patent application, or at least, should have caused a further inquiry to Applicants to properly identify the relevant patent application for Applicants' filed Reply. In fact, the billing entry discussed above in Applicants' matter file indicates that the Examiner did ultimately correctly determine that Applicants timely responded to the Office Action of February 5, 2004.

Further, Applicants also respectfully note that M.P.E.P. ¶ 502 states that "[a] minor error in the identification of the application can be corrected by the Office provided the correct identification can be quickly discovered. Examples of minor errors are transposed numbers, typographical errors, and listing the

parent application number. The failure to give any application number is not a minor error.” This same M.P.E.P. paragraph further states that it would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items: Art Unit Number, Filing Date, name of the Examiner, Title of the Invention, and Confirmation No. Applicants respectfully submit that all of this identifying information regarding the patent application was correctly provided on the Reply and should have allowed the Office to correctly match the paper with the matter file. Applicants respectfully submit that even if the Reply was mis-filed in the wrong application based on Applicants’ transposed numbers, that the Examiner in the mis-filed application should have identified that the paper was mis-filed in that application with a further inquiry to Applicants regarding this unrelated Reply. M.P.E.P. ¶ 502 further states that any correspondence not containing the proper identification will be returned to the sender by OIPE. Applicants respectfully submit that Applicants’ matter file does not contain any record of the Reply being returned to Applicants as a result of any misidentifying information. In fact, Applicants respectfully submit that based on the billing record entry in Applicants’ matter file, the Examiner indicated that the paper had been brought to his attention.

Applicants respectfully submit that even though some period of time has transpired since the Applicants’ filing of the Reply and Request for Withdrawal of the Notice of Abandonment, Applicants have subsequently inquired as to the status of the patent application. Applicants’ representative filed Status Requests in the Patent Office on February 18, 2005, and October 21, 2005. Unfortunately, again, the Application Serial No. on these papers was transposed in these Status Requests. Copies of the date-stamped receipt postcards for the Status Requests are also enclosed.

Applicants respectfully note that the attorney that was prosecuting this patent application for Applicants left the firm and this matter was re-assigned to the below listed attorney. Upon assuming the responsibility for this application

and performing an on-line status check in the Patent Office's PAIR system, Applicants' new representative discovered the prosecution history discussed above. Applicants' new representative then timely prepared and filed this Petition. Applicants also respectfully note that the Examiner has also left the Patent Office.

Applicants respectfully request that in view of the above history, that the Notice of Abandonment in the above-referenced patent application be withdrawn. Applicants respectfully submit that they timely filed a Reply in response to the Office Action of February 5, 2004, and identified the associated patent application for that Reply with sufficient identifying information such that the Reply could be associated with the patent application. Applicants also respectfully submit that they had received an assurance from the Examiner that the Reply had been brought to his attention. Applicants' representative then further pursued withdrawal of the Notice of Abandonment by filing the Request for Withdrawal of the Notice of Abandonment. Applicants' representative continued to file Status Requests on the application, to which no response was received from the Office.

Therefore, in view of all of the above circumstances, Applicants respectfully submit that they timely filed a Reply to the Office Action of February 5, 2004, and conscientiously pursued determining the status of the application after filing of the Reply. Applicants respectfully request that the Notice of Abandonment be withdrawn from the above-referenced patent application. Applicants respectfully note that whereas a Petition under 37 C.F.R. § 1.181(a) may be dismissed as untimely if not received within two months of the mailing date of the action or notice from which relief is requested, Applicants respectfully request the Office's consideration of Applicants' Petition in view of the above circumstances.

If the Office determines not to grant Applicants' Petition under 37 C.F.R. § 1.181(a), Applicants also respectfully petition the Office to revive the application

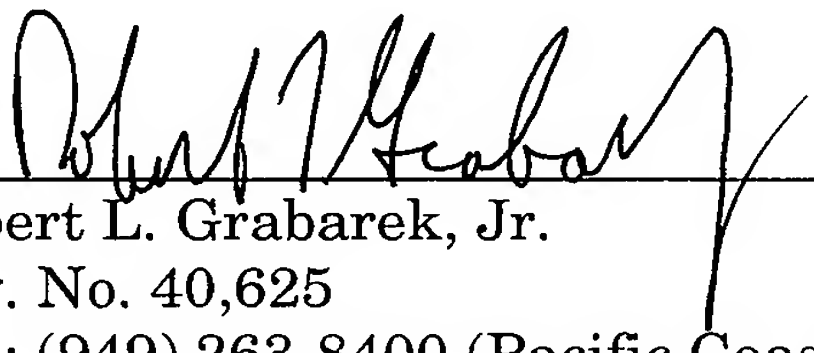
under 37 C.F.R. § 1.137(b). Applicants have also enclosed a Petition under 37 C.F.R. § 1.137(b) for the Office's consideration if the Petition under 37 C.F.R. § 1.181(a) is not granted. If a Petition under 37 C.F.R. § 1.137(b) is required, the Office is authorized to charge the petition fee under 37 C.F.R. 1.17(m) of \$1,500.00 to Deposit Account No. 05-1323 (Docket No. 010816.50684US).

The Office is invited to contact the undersigned should there be any questions regarding this Petition. The Office's consideration of this matter is greatly appreciated.

Respectfully submitted,

CROWELL & MORING LLP

Dated: May 15, 2007

By 
Robert L. Grabarek, Jr.
Reg. No. 40,625
Tel.: (949) 263-8400 (Pacific Coast)

Attachments

Intellectual Property Group
P.O. Box 14300
Washington, D.C. 20044-4300

Crr & Moring LLP

Today's Date: June 2, 2004

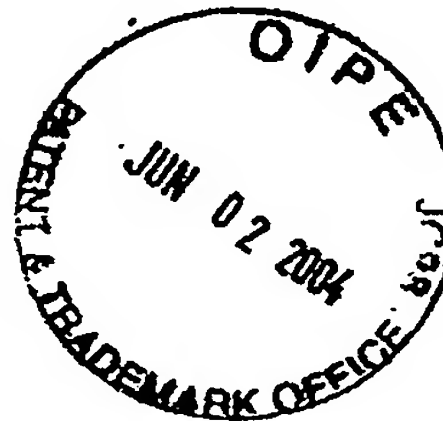
Att'y Docket: 842FR/50684
Inventor(s): Wolfgang SCHEIBE, et al.
Serial No.: 10/049,843
Filing Date: February 19, 2002

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

☒ Fee Transmittal
☒ Reply
☒ Check No. 267960 in the amount of \$110.00

SZ:tlm (010816.50684US; 321432)

DUE DATE: June 5, 2004



COPY

CROWELL & MORING LLP

VENDOR: 04815 Commissioner of Patents and Trademarks - DC 20231

Check No.: 267960

REF #	INV. #	INV. DATE	INV. AMOUNT	INV. DESCRIPTION	AMT. PAID
152634	52804-6:24	05/28/04	110.00	010816.50684US TMS	110.00

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WASHINGTON, D.C. 20004-2595

SUNTRUST
Washington, DC

65-270/550

267960

Check Date

06/01/04

Amount

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Michelle M. Kinsella
Authorized Signature

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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$)**110.00**

Complete if Known

Application Number	10/049,843
Filing Date	February 19, 2002
First Named Inventor	Wolfgang SCHEIBE
Examiner Name	Thach Bui
Art Unit	3752
Attorney Docket No.	010816.50684

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ None
☐ Deposit Account:

Deposit Account Number	05-1323
Deposit Account Name	Crowell & Moring LLP

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Charge any deficiency or credit any overpayments to the deposit account of the undersigned. Attorney Docket No. 010816.50684☐ Charge any additional fee(s) during the pendency of this application.☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1001	770	2001	385	Utility filing fee
1002	340	2002	170	Design filing fee
1003	530	2003	265	Plant filing fee
1004	770	2004	385	Reissue filing fee
1005	160	2005	80	Provisional filing fee

SUBTOTAL (1)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
-20** =	x	=	
Indep. Claims	-3** =	x	=
Multiple Dependent		=	

Large Entity/ Small Entity

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) \$

**or number previously paid, if greater, For Reissues, see above.

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity | Small Entity

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1051	130	2051	65	Surcharge - late filing fee or oath
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet
1053	130	1053	130	Non-English specification
1812	2,520	1812	2,520	For filing a request for ex parte reexamination
1804	920*	1804	920*	Requesting publication of SIR prior to Examination action
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action
1251	110	2251	55	Extension for reply within first month
1252	420	2252	210	Extension for reply within second month
1253	950	2253	475	Extension for reply within third month
1254	1,480	2254	740	Extension for reply within fourth month
1255	2,010	2255	1,005	Extension for reply within fifth month
1401	330	2401	165	Notice of Appeal
1402	330	2402	165	Filing a brief in support of an appeal
1403	290	2403	145	Request for oral hearing
1451	1,510	1451	1,510	Petition to institute a public use proceeding
1452	110	2452	55	Petition to revive - unavoidable
1453	1,330	2453	665	Petition to revive - unintentional
1501	1,330	2501	665	Utility issue fee (or reissue)
1502	480	2502	240	Design issue fee
1503	640	2503	320	Plant issue fee
1406	130	1460	130	Petitions to the Commissioner
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)
1806	180	1806	180	Submission of Information Disclosure Stmt
8021	40	8021	40	Recording each patent assignment per property (times number of properties)
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))
1801	770	2801	385	Request for Continued Examination (RCE)
1802	900	1802	900	Request for expedited examination of a design application

Other fee (specify) _____

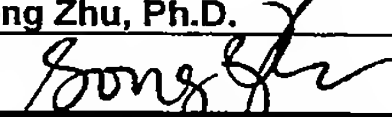
*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

\$110.00

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Song Zhu, Ph.D.	Registration No. (Attorney/Agent)	44,420	Telephone	202-624-2500
Signature		Date	June 2, 2004		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

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/tlm (321551)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	: 10/049,843	Confirmation No.	: 2328
Applicant	: Wolfgang SCHEIBE, <i>et al.</i>		
Filed	: February 19, 2002		
TC/A.U.	: 3752		
Examiner	: Thach H. BUI		
Docket No.	: 842FR/50684		
Customer No.	: 23911		
Title	: INJECTION VALVE FOR A COMBUSTION ENGINE		

REPLY

Mail Stop FEE AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office action of February 5, 2004, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Applicant hereby requests that the period to take action in the above-captioned application be extended by one month pursuant to the provisions of 37 C.F.R. 1.136(a). A check in the amount of \$110.00 is submitted herewith in payment of the required extension fee. The Commissioner is authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 05-1323 (CAM #010816.50684US).

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An injection valve for an internal combustion engine comprising: a control valve, which is activated especially electromagnetically and, by means of a valve actuator, alternatively closes off or opens up an opening for the passages of a fluid, which is assigned to a sealing surface and, by these means, controls the pressure in a control pressure space, which is connected with the passage opening, the valve actuator, in addition to an actuator sealing surface, which acts together with the sealing surface of the opening for the passage of fluid, having an actuator stop surface, which is disposed at a distance from the actuator sealing surface, the valve actuator having a valve rod which, in relation to the distance between the sealing surface and the stop surface of the actuator has an extra length overlength, wherein, during the a closing movement of the valve actuator, the extra length overlength is taken up by the an elastic deformation of the valve rod.
2. (previously presented) The injection valve of claim 1, wherein the stop surface of the actuator is significantly larger than the sealing surface.
3. (previously presented) The injection valve of claim 1, wherein the valve actuator is formed with a one-part or a two-part valve rod.
4. (previously presented) The injection valve of claim 3, wherein the valve actuator contains a valve body, which touches the front face of the valve rod and contains the sealing surface of the actuator.
5. (previously presented) The injection valve of claim 4, wherein the valve body is constructed as a sphere, which interacts with the opening for the passage of fluid, forming a seal.
6. (previously presented) The injection valve of claim 3, wherein the sealing surface of the actuator is the front face of the valve rod formed by the valve actuator.

7. (previously presented) The injection valve of claim 3, wherein the valve actuator is essentially mushroom-shaped, the stem of the mushroom forming the valve rod and the stop surface of the actuator being an annular collar, concentrically surrounding the valve rod in the region of the mushroom cap.
8. (previously presented) The injection valve of claim 3, wherein the valve actuator is divided in a dividing joint into an actuator stop, having the stop surface of the actuator, and a valve rod, which is in operative connection with the sealing surface and the stop of the actuator.
9. (previously presented) The injection valve of claim 3, wherein the actuator stop is essentially mushroom-shaped, the stop surface of the actuator being an end face, contacting the valve rod in the region of the foot of the mushroom.
10. (previously presented) The injection valve of claim 3, wherein the valve rod is guided axially movably in at least one guide bushing.
11. (previously presented) The injection valve of claim 10, wherein a guide bushing is disposed at a small distance from the sealing surface of the actuator.
12. (previously presented) The injection valve of claim 3, wherein the length of the valve rod is a multiple of its diameter.
13. (previously presented) The injection valve of claim 1, wherein the sealing surface is formed in the end face of a disk-shaped insert part and adjoins the control pressure space on the side averted from the sealing surface.
14. (previously presented) The injection valve of claim 13, wherein the insert part is formed in two parts with a first part, which contains an opening for the passage of fluid and a discharge choke and a second part at the control pressure space side, with a borehole, which connects the control pressure space with an opening for the passage of fluid.
15. (previously presented) The injection valve of claim 14, wherein the second part contains an inlet choke, which is connected with the borehole.

16. (previously presented) The injection valve of claim 13, wherein the insert part contains an inlet choke in addition to the outlet choke.

17. (previously presented) The injection valve of claim 13, wherein the control pressure space is connected with an inlet choke.

18. (previously presented) The injection valve of claim 13, wherein the rear end of the valve needle, averted from the nozzle needle seat surface, lies in the control pressure space.

19. (previously presented) The injection valve of claim 18, wherein the insert part forms a stop for the valve needle.

20. (previously presented) The injection valve of claim 13, wherein the insert part, a centering and holding clamp and a sleeve, in which at least one valve rod and at least one guide bushing with the actuator stop surface is taken up, form a structural unit, which can be pre-adjusted by itself in relation to the protrusion of the valve rod.

21. (previously presented) An injection valve for an internal combustion engine comprising:

an opening having a sealing surface;

a stop displaced a distance from the opening; and

an electromagnetical control valve including:

a valve actuator having an opening position and a closing position, the valve actuator including:

an actuator sealing surface that engages the sealing surface of the opening when the valve actuator is at the closing position,

an actuator stop surface that engages the stop when the valve actuator is at the closing position, and

a valve rod disposed between the actuator sealing surface and the actuator stop surface, wherein when the valve actuator is at the closing position, the valve rod is compressed to a length that is shorter than a length of the valve rod when the valve actuator is at the opening position.

22. (previously presented) The injection valve of claim 21, wherein the stop surface of the actuator is significantly larger than the sealing surface.

23. (previously presented) The injection valve of claim 21, wherein the valve actuator is formed with a one-part or a two-part valve rod.

24. (previously presented) The injection valve of claim 23, wherein the valve actuator contains a valve body, which is positioned at a front face of the valve rod and contains the sealing surface of the actuator.

25. (previously presented) The injection valve of claim 24, wherein the valve body has the configuration of a sphere.

26. (previously presented) The injection valve of claim 23, wherein the sealing surface of the valve actuator is a front face of the valve rod.

27. (previously presented) The injection valve of claim 23, wherein the valve rod is axially movably guided in a guide bushing.

28. (previously presented) The injection valve of claim 27, wherein a guide bushing is disposed near the actuator sealing surface.

29. (previously presented) The injection valve of claim 23, wherein the length of the valve rod is a multiple of its diameter.

30. (previously presented) The injection valve of claim 21 further comprising a disk-shaped insert having a first end face that includes the sealing surface, and a second end face adjoining a control pressure space.

31. (previously presented) The injection valve of claim 30, wherein the insert has a first part, which includes the opening and a discharge choke, and a second part, which includes a borehole that connects the control pressure space with the opening.
32. (previously presented) The injection valve of claim 31, wherein the second part of the insert includes an inlet choke, which is connected with the borehole.
33. (previously presented) The injection valve of claim 30, wherein the insert includes an inlet choke.
34. (previously presented) The injection valve of claim 30, wherein the control pressure space is connected to the inlet choke.
35. (previously presented) The injection valve of claim 30 comprising a valve needle having an end disposed in the control pressure space.
36. (previously presented) The injection valve of claim 35, wherein the insert part forms a stop for the valve needle.
37. (previously presented) The injection valve of claim 30 further comprising a centering and holding clamp and a sleeve, wherein the insert part, the centering and holding clamp and the sleeve, in which the valve rod and the guide bushing that includes the actuator stop surface are placed, form a structural unit, which can be pre-adjusted in relation to the valve rod.

REMARKS/ARGUMENT

Description of amendments

Claims 1-37 are now pending and under examination. Applicant has amended claim 1 to replace the term "overlength" with a more descriptive term "extra length" and to provided antecedent basis for "the closing movement" and "the elastic deformation of the valve rod." No new matter has been added.

Interview summary

Applicant's attorney/counsel greatly appreciates the courtesy extended by Examiner Bui during the course of an interview conducted on May 12, 2004.

In the interview, Applicant's counsel described the structure and operation of the claimed invention. Applicant's counsel argued that the cited art does not disclose (1) a sealing surface, (2) an actuator stop surface, which is disposed at a distance from the actuator sealing surface, (3) a valve rod which, in relation to the distance between the sealing surface and the stop surface of the actuator has an overlength, wherein, during the closing movement, the overlength is taken up by the elastic deformation of the valve rod. Examiner asked that Applicant recites these arguments in this response.

Allowed and allowable claims

Applicant appreciates that the Examiner has indicated claims 16, 20, 33, and 37 would be allowable if they are rewritten to include all of the limitations of the base claim and any intervening claims.

Objection to the specification

The Examiner stated that the specification does not contain an abstract. Applicant respectfully disagrees because an abstract is provided in the international phase of the present application.

Rejection under 35 U.S.C. §112, second paragraph

Claims 1-20 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended the claims to overcome the rejection (see the amendments to claim 1).

Rejection under 35 U.S.C. §102

Claims 1-15, 17-19, 21-32, and 34-36 were rejected under 35 U.S.C. §102(b) as being anticipated by Baumgartner (U.S. Patent 6,161,813). For the following reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection.

In prior art injection valves, as discussed in the interview and set forth in the background section of the present application, a valve actuator is used to open or close a valve opening to control the injection of fuel into the combustion chambers of the engine. To close the valve opening, a surface of the valve actuator contacts a sealing surface to seal the valve opening. In addition, the sealing surface functions as a stopping surface to stop the movement of the valve actuator towards the valve opening.

As discussed in the background section of the present application, a problem with this conventional arrangement is that the sealing surface and the stopping surface put contradictory demands on the size of the valve actuator's surface. The stopping surface demands a large actuator surface to reduce the impact when the stopping surface of the valve actuator collides with the sealing surface to stop the movement of the valve actuator. On the other hand, the sealing surface requires a small actuator surface to provide better sealing.

As discussed in the interview, the claimed invention solves the problem by providing the injection valve with two separate surfaces: an actuator stop surface (12a) and a sealing surface (13, 17). When the valve is closed, the movement of the valve actuator (12) is stopped by the actuator stop surface (12a). The valve actuator (12) itself does not close the

opening (14a); instead it pushes a valve rod (16) against the sealing surface (13, 17) so that a surface of the valve rod (16) closes the opening (14a).

This new arrangement requires that, when the valve opening (14a) is closed, the valve actuator (12) contacts the stop surface (12a) and the valve rod (16) contacts the sealing surface (13, 17). In order to ensure that when the valve actuator (12) is stopped by the actuator stop surface (12a), the valve rod (16) contacts the sealing surface (13, 17) to close the opening (14a), the valve rod (16) has a free length that is longer than the distance between the actuator stop surface (12a) and the sealing surface (13, 17). When the valve rod (16) is pushed by the valve actuator (12) against the sealing surface (13, 17) to close the opening (14a), the valve rod (16) is compressed so that its compressed length is equal to the distance between the actuator stop surface (12a) and the sealing surface (13, 17); as a result, it is ensured that, when the valve opening (14a) is closed, the valve actuator (12) contacts the stop surface (12a) and the valve rod (16) contacts the sealing surface (13, 17).

These features are not disclosed by Baumgartner. In fact, Baumgartner is exactly the same as prior art. For example, in Baumgartner, the contact between the valve seat (24) and the valve member (25) is used both to stop the movement of the valve member (25) and to seal the valve opening. Further, Baumgartner does not disclose a valve rod (16) that has a free length longer than the distance between an actuator stop surface (12a) and a sealing surface (13, 17) and that, when it is pushed by the valve actuator (12) against the sealing surface (13, 17) to close the opening (14a), is compressed so that its compressed length is equal to the distance between the actuator stop surface (12a) and the sealing surface (13, 17). Therefore, Baumgartner does not anticipate claims 1-15, 17-19, 21-32, and 34-36.

In light of the foregoing remarks, this application is considered to be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

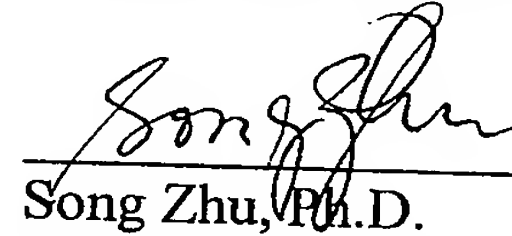
If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any

Application No. 10/049,843
Reply dated June 2, 2004
Response to Office Action dated February 5, 2004

deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (CAM # 010816.50684US).

June 2, 2004

Respectfully submitted,



Song Zhu, Ph.D.
Registration No. 44,420
Donald D. Evenson
Registration No. 26,160

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
DDE:SZ:tlm (010816.50684US; 321430)

CROWELL & MORING
PROFORMABILLING ATTORNEY: 001316 Donald D. Evenson
CLIENT: 010816 L'Orange GmbH
MATTER: 010816.50684US New U.S. Patent ApplicationFEE AND DISBURSEMENTS THROUGH 08/19/04
LAST DATE BILLED 06/03/04 DATE BILLED THRU 06/02/04
BILL CYCLE: R
MATTER OPEN DATE: 01/28/2002
PROFORMA JOINT GROUP #TOTAL FEES THIS PROFORMA \$ 1,116.00
TOTAL DISBURSEMENTS THIS PROFORMA \$ 343.84
TOTAL THIS PROFORMA \$ 1,459.84UNALLOCATED CASH \$.00
TRUST BALANCE
ON-ACCOUNT BILLS \$.00

PROFESSIONAL SERVICES

INDEX	DATE	ATTORNEY NAME	DESCRIPTION OF PROFESSIONAL SERVICES	HOURS WORKED	TIME VALUE THIS PERIOD	RUNNING TOTAL
3194097	05/25/04	Zhu, S.	Prepare and file response to Office Action; report.	2.60	806.00	806.00
3331591	08/11/04	Zhu, S.	Received telephone call from Examiner regarding whether we had filed response to Office Action of February 5, 2004; checked status of application; telephoned Examiner to advise that response was filed on June 2, 2004; received telephone call from Examiner advising that response was timely filed but Examiner had mistakenly sent Notice of Abandonment; report to client. prepare & file Reg. to W/DRAW Notice of Abandonment	1.00 3.60	310.00 \$1,116.00	1,116.00

There is another time entry
\$400.00
Bill

Crowell & Moring LLP

Today's Date: August 19, 2004

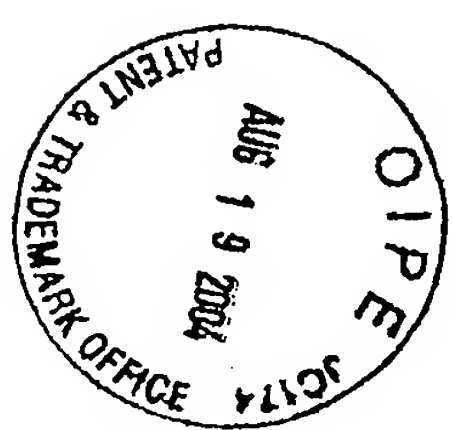
Att'y Docket: 842FR/50684
 Inventor(s): Wolfgang SCHEIBE, et al.
 Serial No.: 10/049,843
 Filing Date: February 19, 2002

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

- ☒ Request to Withdraw Notice of Abandonment
- ☒ Copy of Postcard date stamped on June 2, 2004 by the US PTO
- ☒ Copy of June 2, 2004 fee transmittal
- ☒ Copy of June 2, 2004, Reply to February 5, 2004, Office Action

DDE:SZ:tlm (010816.50684US; 333960)

DUE DATE: August 19, 2004



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/049,843 Confirmation No. : 2328
Applicant : Wolfgang SCHEIBE, *et al.*
Filed : February 19, 2002
TC/A.U. : 3752
Examiner : Thach H. BUI
Docket No. : 842FR/50684
Customer No. : 23911
Title : INJECTION VALVE FOR A COMBUSTION ENGINE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST TO WITHDRAW NOTICE OF ABANDONMENT

Sir:

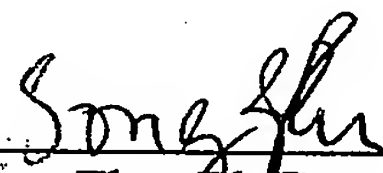
Applicants received a Notice of Abandonment dated August 12, 2004, allegedly for failure to respond to the Office Action of February 5, 2004. However, as noted on the attached copy of the postcard date stamped by the U.S. Patent Office on June 2, 2004, Applicants did properly respond to the Office Action. Accordingly, Applicants request that the Notice of Abandonment be withdrawn.

In order to aid the Examiner, Applicants submit herewith a further copy of the Amendment and Petition for Extension of Time that were previously filed with the U.S. Patent and Trademark Office on June 2, 2004.

In view of the abandonment being the fault of the U.S. Patent and Trademark Office, Applicants respectfully request that the Notice of Abandonment be withdrawn.

Respectfully submitted,

August 19, 2004



Song Zhu, Ph.D.
Registration No. 44,420
Donald D. Evenson
Registration No. 26,160

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
DDE:SZ:tlm (010816.50684US; 333954)

Cro & Moring LLP

Today's Date: June 2, 2004

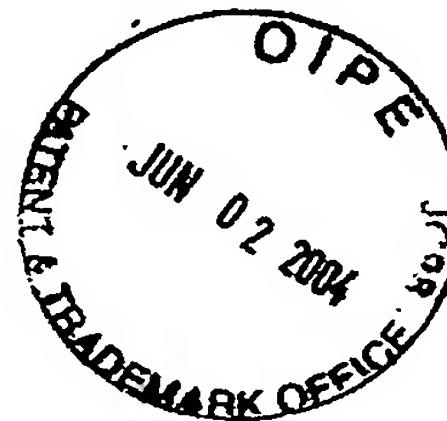
Att'y Docket: 842FR/50684
Inventor(s): Wolfgang SCHEIBE, et al.
Serial No.: 10/049,843
Filing Date: February 19, 2002

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

☒ Fee Transmittal
☒ Reply
☒ Check No. 267960 in the amount of \$110.00

SZ:tlm (010816.50684US; 321432)

DUE DATE: June 5, 2004



COPY

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**FEE TRANSMITTAL
for FY 2004**

Effective 10/01/2003. Patent fees are subject to annual revision.

Complete if Known

Application Number	10/049,843
Filing Date	February 19, 2002
First Named Inventor	Wolfgang SCHEIBE
Examiner Name	Thach Bui
Art Unit	3752
Attorney Docket No.	010816.50684

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$)**110.00****METHOD OF PAYMENT (check all that apply)**☒ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ None☐ Deposit AccountDeposit
Account
Number
Deposit
Account
Name

05-1323

Crowell & Moring LLP

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Charge any deficiency or credit any overpayments to the deposit account of the undersigned. Attorney Docket No. 010816.50684☐ Charge any additional fee(s) during the pendency of this application.☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Fee Code	Large Fee (\$)	Small Fee Code	Small Fee (\$)	Fee Description
1001	770	2001	385	Utility filing fee
1002	340	2002	170	Design filing fee
1003	530	2003	265	Plant filing fee
1004	770	2004	385	Reissue filing fee
1005	160	2005	80	Provisional filing fee

SUBTOTAL (1)**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims	Extra Claims	Fee from below	Fee Paid
-20** =	x	=	
Indep. Claims	-3** =	x	=
Multiple Dependent			=

Large Entity Small Entity

Large Fee Code	Large Fee (\$)	Small Fee Code	Small Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) \$

**or number previously paid, if greater; For Reissues, see above.

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

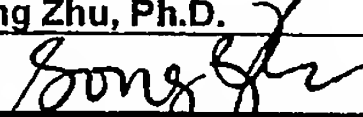
Large Entity Small Entity

Large Fee Code	Large Fee (\$)	Small Fee Code	Small Fee (\$)	Fee Description
1051	130	2051	65	Surcharge - late filing fee or oath
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet
1053	130	1053	130	Non-English specification
1812	2,520	1812	2,520	For filing a request for ex parte reexamination
1804	920*	1804	920*	Requesting publication of SIR prior to Examination action
1805	1,840	1805	1,840*	Requesting publication of SIR after Examiner action
1251	110	2251	55	Extension for reply within first month
1252	420	2252	210	Extension for reply within second month
1253	950	2253	475	Extension for reply within third month
1254	1,480	2254	740	Extension for reply within fourth month
1255	2,010	2255	1,005	Extension for reply within fifth month
1401	330	2401	165	Notice of Appeal
1402	330	2402	165	Filing a brief in support of an appeal
1403	290	2403	145	Request for oral hearing
1451	1,510	1451	1,510	Petition to institute a public use proceeding
1452	110	2452	55	Petition to revive - unavoidable
1453	1,330	2453	665	Petition to revive - unintentional
1501	1,330	2501	665	Utility issue fee (or reissue)
1502	480	2502	240	Design issue fee
1503	640	2503	320	Plant issue fee
1406	130	1460	130	Petitions to the Commissioner
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)
1806	180	1806	180	Submission of Information Disclosure Stmt
8021	40	8021	40	Recording each patent assignment per property (times number of properties)
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))
1801	770	2801	385	Request for Continued Examination (RCE)
1802	900	1802	900	Request for expedited examination of a design application

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)**\$110.00****SUBMITTED BY****Complete (if applicable)**

Name (Print/Type)	Song Zhu, Ph.D.	Registration No. (Attorney/Agent)	44,420	Telephone	202-624-2500
Signature		Date	June 2, 2004		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/049,843 Confirmation No. : 2328
Applicant : Wolfgang SCHEIBE, *et al.*
Filed : February 19, 2002
TC/A.U. : 3752
Examiner : Thach H. BUI
Docket No. : 842FR/50684
Customer No. : 23911
Title : INJECTION VALVE FOR A COMBUSTION ENGINE

REPLY**Mail Stop FEE AMENDMENT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office action of February 5, 2004, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Applicant hereby requests that the period to take action in the above-captioned application be extended by one month pursuant to the provisions of 37 C.F.R. 1.136(a). A check in the amount of \$110.00 is submitted herewith in payment of the required extension fee. The Commissioner is authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 05-1323 (CAM #010816.50684US).

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An injection valve for an internal combustion engine comprising: a control valve, which is activated especially electromagnetically and, by means of a valve actuator, alternatively closes off or opens up an opening for the passages of a fluid, which is assigned to a sealing surface and, by these means, controls the pressure in a control pressure space, which is connected with the passage opening, the valve actuator, in addition to an actuator sealing surface, which acts together with the sealing surface of the opening for the passage of fluid, having an actuator stop surface, which is disposed at a distance from the actuator sealing surface, the valve actuator having a valve rod which, in relation to the distance between the sealing surface and the stop surface of the actuator has an extra length overlength, wherein, during the a closing movement of the valve actuator, the extra length overlength is taken up by the an elastic deformation of the valve rod.
2. (previously presented) The injection valve of claim 1, wherein the stop surface of the actuator is significantly larger than the sealing surface.
3. (previously presented) The injection valve of claim 1, wherein the valve actuator is formed with a one-part or a two-part valve rod.
4. (previously presented) The injection valve of claim 3, wherein the valve actuator contains a valve body, which touches the front face of the valve rod and contains the sealing surface of the actuator.
5. (previously presented) The injection valve of claim 4, wherein the valve body is constructed as a sphere, which interacts with the opening for the passage of fluid, forming a seal.
6. (previously presented) The injection valve of claim 3, wherein the sealing surface of the actuator is the front face of the valve rod formed by the valve actuator.

7. (previously presented) The injection valve of claim 3, wherein the valve actuator is essentially mushroom-shaped, the stem of the mushroom forming the valve rod and the stop surface of the actuator being an annular collar, concentrically surrounding the valve rod in the region of the mushroom cap.
8. (previously presented) The injection valve of claim 3, wherein the valve actuator is divided in a dividing joint into an actuator stop, having the stop surface of the actuator, and a valve rod, which is in operative connection with the sealing surface and the stop of the actuator.
9. (previously presented) The injection valve of claim 3, wherein the actuator stop is essentially mushroom-shaped, the stop surface of the actuator being an end face, contacting the valve rod in the region of the foot of the mushroom.
10. (previously presented) The injection valve of claim 3, wherein the valve rod is guided axially movably in at least one guide bushing.
11. (previously presented) The injection valve of claim 10, wherein a guide bushing is disposed at a small distance from the sealing surface of the actuator.
12. (previously presented) The injection valve of claim 3, wherein the length of the valve rod is a multiple of its diameter.
13. (previously presented) The injection valve of claim 1, wherein the sealing surface is formed in the end face of a disk-shaped insert part and adjoins the control pressure space on the side averted from the sealing surface.
14. (previously presented) The injection valve of claim 13, wherein the insert part is formed in two parts with a first part, which contains an opening for the passage of fluid and a discharge choke and a second part at the control pressure space side, with a borehole, which connects the control pressure space with an opening for the passage of fluid.
15. (previously presented) The injection valve of claim 14, wherein the second part contains an inlet choke, which is connected with the borehole.

16. (previously presented) The injection valve of claim 13, wherein the insert part contains an inlet choke in addition to the outlet choke.
17. (previously presented) The injection valve of claim 13, wherein the control pressure space is connected with an inlet choke.
18. (previously presented) The injection valve of claim 13, wherein the rear end of the valve needle, averted from the nozzle needle seat surface, lies in the control pressure space.
19. (previously presented) The injection valve of claim 18, wherein the insert part forms a stop for the valve needle.
20. (previously presented) The injection valve of claim 13, wherein the insert part, a centering and holding clamp and a sleeve, in which at least one valve rod and at least one guide bushing with the actuator stop surface is taken up, form a structural unit, which can be pre-adjusted by itself in relation to the protrusion of the valve rod.
21. (previously presented) An injection valve for an internal combustion engine comprising:
- an opening having a sealing surface;
 - a stop displaced a distance from the opening; and
 - an electromagnetical control valve including:
 - a valve actuator having an opening position and a closing position, the valve actuator including:
 - an actuator sealing surface that engages the sealing surface of the opening when the valve actuator is at the closing position,
 - an actuator stop surface that engages the stop when the valve actuator is at the closing position, and

a valve rod disposed between the actuator sealing surface and the actuator stop surface, wherein when the valve actuator is at the closing position, the valve rod is compressed to a length that is shorter than a length of the valve rod when the valve actuator is at the opening position.

22. (previously presented) The injection valve of claim 21, wherein the stop surface of the actuator is significantly larger than the sealing surface.

23. (previously presented) The injection valve of claim 21, wherein the valve actuator is formed with a one-part or a two-part valve rod.

24. (previously presented) The injection valve of claim 23, wherein the valve actuator contains a valve body, which is positioned at a front face of the valve rod and contains the sealing surface of the actuator.

25. (previously presented) The injection valve of claim 24, wherein the valve body has the configuration of a sphere.

26. (previously presented) The injection valve of claim 23, wherein the sealing surface of the valve actuator is a front face of the valve rod.

27. (previously presented) The injection valve of claim 23, wherein the valve rod is axially movably guided in a guide bushing.

28. (previously presented) The injection valve of claim 27, wherein a guide bushing is disposed near the actuator sealing surface.

29. (previously presented) The injection valve of claim 23, wherein the length of the valve rod is a multiple of its diameter.

30. (previously presented) The injection valve of claim 21 further comprising a disk-shaped insert having a first end face that includes the sealing surface, and a second end face adjoining a control pressure space.

31. (previously presented) The injection valve of claim 30, wherein the insert has a first part, which includes the opening and a discharge choke, and a second part, which includes a borehole that connects the control pressure space with the opening.
32. (previously presented) The injection valve of claim 31, wherein the second part of the insert includes an inlet choke, which is connected with the borehole.
33. (previously presented) The injection valve of claim 30, wherein the insert includes an inlet choke.
34. (previously presented) The injection valve of claim 30, wherein the control pressure space is connected to the inlet choke.
35. (previously presented) The injection valve of claim 30 comprising a valve needle having an end disposed in the control pressure space.
36. (previously presented) The injection valve of claim 35, wherein the insert part forms a stop for the valve needle.
37. (previously presented) The injection valve of claim 30 further comprising a centering and holding clamp and a sleeve, wherein the insert part, the centering and holding clamp and the sleeve, in which the valve rod and the guide bushing that includes the actuator stop surface are placed, form a structural unit, which can be pre-adjusted in relation to the valve rod.

Application No. 10/049,843
Reply dated June 2, 2004
Response to Office Action dated February 5, 2004

REMARKS/ARGUMENT

Description of amendments

Claims 1-37 are now pending and under examination. Applicant has amended claim 1 to replace the term "overlength" with a more descriptive term "extra length" and to provided antecedent basis for "the closing movement" and "the elastic deformation of the valve rod." No new matter has been added.

Interview summary

Applicant's attorney/counsel greatly appreciates the courtesy extended by Examiner Bui during the course of an interview conducted on May 12, 2004.

In the interview, Applicant's counsel described the structure and operation of the claimed invention. Applicant's counsel argued that the cited art does not disclose (1) a sealing surface, (2) an actuator stop surface, which is disposed at a distance from the actuator sealing surface, (3) a valve rod which, in relation to the distance between the sealing surface and the stop surface of the actuator has an overlength, wherein, during the closing movement, the overlength is taken up by the elastic deformation of the valve rod. Examiner asked that Applicant recites these arguments in this response.

Allowed and allowable claims

Applicant appreciates that the Examiner has indicated claims 16, 20, 33, and 37 would be allowable if they are rewritten to include all of the limitations of the base claim and any intervening claims.

Objection to the specification

The Examiner stated that the specification does not contain an abstract. Applicant respectfully disagrees because an abstract is provided in the international phase of the present application.

Rejection under 35 U.S.C. §112, second paragraph

Claims 1-20 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended the claims to overcome the rejection (see the amendments to claim 1).

Rejection under 35 U.S.C. §102

Claims 1-15, 17-19, 21-32, and 34-36 were rejected under 35 U.S.C. §102(b) as being anticipated by Baumgartner (U.S. Patent 6,161,813). For the following reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection.

In prior art injection valves, as discussed in the interview and set forth in the background section of the present application, a valve actuator is used to open or close a valve opening to control the injection of fuel into the combustion chambers of the engine. To close the valve opening, a surface of the valve actuator contacts a sealing surface to seal the valve opening. In addition, the sealing surface functions as a stopping surface to stop the movement of the valve actuator towards the valve opening.

As discussed in the background section of the present application, a problem with this conventional arrangement is that the sealing surface and the stopping surface put contradictory demands on the size of the valve actuator's surface. The stopping surface demands a large actuator surface to reduce the impact when the stopping surface of the valve actuator collides with the sealing surface to stop the movement of the valve actuator. On the other hand, the sealing surface requires a small actuator surface to provide better sealing.

As discussed in the interview, the claimed invention solves the problem by providing the injection valve with two separate surfaces: an actuator stop surface (12a) and a sealing surface (13, 17). When the valve is closed, the movement of the valve actuator (12) is stopped by the actuator stop surface (12a). The valve actuator (12) itself does not close the

opening (14a); instead it pushes a valve rod (16) against the sealing surface (13, 17) so that a surface of the valve rod (16) closes the opening (14a).

This new arrangement requires that, when the valve opening (14a) is closed, the valve actuator (12) contacts the stop surface (12a) and the valve rod (16) contacts the sealing surface (13, 17). In order to ensure that when the valve actuator (12) is stopped by the actuator stop surface (12a), the valve rod (16) contacts the sealing surface (13, 17) to close the opening (14a), the valve rod (16) has a free length that is longer than the distance between the actuator stop surface (12a) and the sealing surface (13, 17). When the valve rod (16) is pushed by the valve actuator (12) against the sealing surface (13, 17) to close the opening (14a), the valve rod (16) is compressed so that its compressed length is equal to the distance between the actuator stop surface (12a) and the sealing surface (13, 17); as a result, it is ensured that, when the valve opening (14a) is closed, the valve actuator (12) contacts the stop surface (12a) and the valve rod (16) contacts the sealing surface (13, 17).

These features are not disclosed by Baumgartner. In fact, Baumgartner is exactly the same as prior art. For example, in Baumgartner, the contact between the valve seat (24) and the valve member (25) is used both to stop the movement of the valve member (25) and to seal the valve opening. Further, Baumgartner does not disclose a valve rod (16) that has a free length longer than the distance between an actuator stop surface (12a) and a sealing surface (13, 17) and that, when it is pushed by the valve actuator (12) against the sealing surface (13, 17) to close the opening (14a), is compressed so that its compressed length is equal to the distance between the actuator stop surface (12a) and the sealing surface (13, 17). Therefore, Baumgartner does not anticipate claims 1-15, 17-19, 21-32, and 34-36.

In light of the foregoing remarks, this application is considered to be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

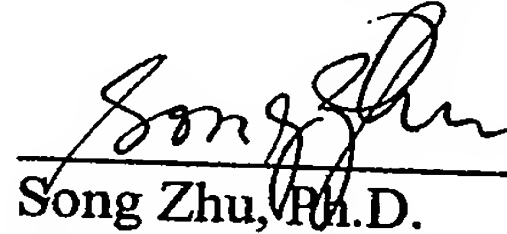
If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any

Application No. 10/049,843
Reply dated June 2, 2004
Response to Office Action dated February 5, 2004

deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (CAM # 010816.50684US).

June 2, 2004

Respectfully submitted,



Song Zhu, Ph.D.
Registration No. 44,420
Donald D. Evenson
Registration No. 26,160

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
DDE:SZ:tlm (010816.50684US; 321430)

35

Crowell & Moring LLP

Today's Date: February 18, 2005

Att'y Docket: 842FR/50684
First Named Inventor: Wolfgang SCHEIBE
Serial No.: 10/049,843
Filing Date: February 19, 2002

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

☒ Status Request

DDE:SZ:tlm (010816.50684US; 361613)

DUE DATE: February 19, 2005



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/049,843 Confirmation No. : 2328
First Named Inventor : Wolfgang SCHEIBE
Filed : February 19, 2002
TC/A.U. : 3752
Examiner : Thach BUI

Docket No. : 842FR/50684
Customer No. : 23911

Title : INJECTION VALVE FOR A COMBUSTION ENGINE

STATUS REQUEST

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450


Sir:

Our records indicate that we have not received any further correspondence in reference to the above-identified application since August 19, 2004, when we filed our Request to Withdraw Notice of Abandonment. Please advise the undersigned of the status of the application.

It would be appreciated if the undersigned were telephoned in the event there are any questions related to this Request or the application in general.

Respectfully submitted,

February 18, 2005



Song Zhu, Ph.D.
Registration No. 44,420

Donald D. Evenson
Registration No. 26,160

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
DDE:SZ:tlm (010816.50684US; 361611)

Crowell & Moring LLP

Today's Date: October 21, 2005

Att'y Docket: 842FR/50684
First Named Inventor: Wolfgang SCHEIBE
Serial No.: 10/049,843
Filing Date: February 19, 2002

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

☒ Status Request (1 pg.)

DDE:SZ:smw

DUE DATE: _____



33

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/049,843 Confirmation No. : 2328
First Named Inventor : Wolfgang SCHEIBE
Filed : February 19, 2002
TC/A.U. : 3752
Examiner : Thach BUI

Docket No. : 842FR/50684
Customer No. : 23911

Title : INJECTION VALVE FOR A COMBUSTION ENGINE

STATUS REQUEST

Commissioner for Patents
P.O. Box 1450
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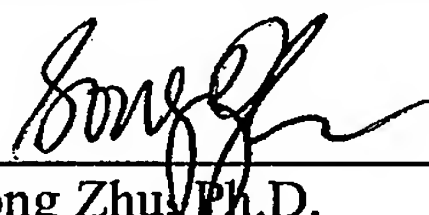
Sir:

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It would be appreciated if the undersigned were telephoned in the event there are any questions related to this Request or the application in general.

Respectfully submitted,

October 21, 2005



Song Zhu, Ph.D.
Registration No. 44,420

Donald D. Evenson
Registration No. 26,160

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
DDE:SZ:smw

**PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT
ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)**Docket Number (Optional)
842FR/50684

First named inventor: Wolfgang SCHEIBE

Application No.: 10/049,834

Art Unit: 3752

Filed: February 19, 2002

Examiner: Thach Bui

Title: INJECTION VALVE FOR A COMBUSTION ENGINE

Attention: Office of Petitions

Mail Stop Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

FAX (571) 273-8300

NOTE: If information or assistance is needed in completing this form, please contact Petitions Information at (571) 272-3282.

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the office notice or action plus an extensions of time actually obtained.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION

NOTE: A grantable petition requires the following items:

- (1) Petition fee;
- (2) Reply and/or issue fee;
- (3) Terminal disclaimer with disclaimer fee - required for all utility and plant applications filed before June 8, 1995; and for all design applications; and
- (4) Statement that the entire delay was unintentional.

1. Petition fee
☐ Small entity-fee \$ _____ (37 CFR 1.17(m)). Applicant claims small entity status. See 37 CFR 1.27.

☒ Other than small entity – fee \$ 1,500.00 (37 CFR 1.17(m))
2. Reply and/or fee

A. The reply and/or fee to the above-noted Office action in the form of Reply (identify type of reply):

- ☒ has been filed previously on June 2, 2004.
- ☒ is enclosed herewith.

B. The issue fee and publication fee (if applicable) of \$ _____.

- ☐ has been paid previously on _____.
- ☐ is enclosed herewith.

[Page 1 of 2]

This collection of information is required by 37 CFR 1.137(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

3. Terminal disclaimer with disclaimer fee

- ☒ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.
- ☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ _____ for a small entity or \$ _____ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D)).]

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

Robert L. Grabarek, Jr.
Signature

05/15/2007

Date

Robert L. Grabarek, Jr.

Typed or printed name

40,625

Registration Number, if applicable

P.O. Box 14300

Address

(202) 624-2500

Telephone Number

Washington, D.C. 20044-4300

Address

Enclosures: ☒ Fee Payment☒ Reply☐ Terminal Disclaimer Form☒ Additional sheets containing statements establishing unintentional delay☐ Other: _____**CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)]**

I hereby certify that this correspondence is being:

☐ Deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

☐ Transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at (571) 273-8300.

Date

Signature

Typed or printed name of person signing certificate